What is claimed is:

[Claim 1] 1. A polyphase network comprising:

first, second, third, and fourth impedances of a first type;
first, second, third, and fourth impedances of a second type;
a first positive in-phase terminal coupled to a first end of the first impedance
of the first type and a first end of the first impedance of the second type using
a first connection;
a first negative in-phase terminal coupled to a second end of the fourth
impedance of the first type and a second end of the fourth impedance of the
second type using a second connection;
a second positive quadrature-phase terminal coupled to a first end of the
second impedance of the first type and a second end of the first impedance of
the second type using a third connection;
a second positive in-phase terminal coupled to a second end of the first
impedance of the first type and a first end of the second impedance of the
second type using a fourth connection;
a second negative in-phase terminal coupled to a first end of the fourth
impedance of the first type and a second end of the third impedance of the
second type using a fifth connection; and
a second negative quadrature-phase terminal coupled to a second end of the
third impedance of the first type and a first end of the fourth impedance of the
second type using a sixth connection;

wherein the first and fourth impedances of the first type are substantially
equal distances from and on a same side of a first axis, and are substantially
equal distances from and on opposite sides of a symmetry axis;
the second and third impedances of the first type are substantially equal
distances from and on a same side of the first axis, and are substantially equal
distances from and on opposite sides of the symmetry axis;

the first and fourth impedances of the second type are substantially equal distances from and on a same side of a second axis, and are substantially equal distances from and on opposite sides of the symmetry axis; and
the second and third impedances of the second type are substantially equal distances from and on a same side of the second axis, and are substantially equal distances from and on opposite sides of the symmetry axis.

[Claim 2]   2. The polyphase network of claim 1, wherein the first axis is adjacent and substantially parallel with the second axis.

[Claim 3]   3. The polyphase network of claim 2, wherein the symmetry axis is substantially perpendicular to the first axis and the second axis.

[Claim 4]   4. The polyphase network of claim 1, further comprising:

a first positive quadrature-phase input terminal coupled to a second end of the second impedance of the first type and a first end of the third impedance of the second type using a seventh connection; and
a first negative quadrature-phase input terminal coupled to a first end of the third impedance of the first type and a second end of the second impedance of the second type using an eighth connection.

[Claim 5]   5. The polyphase network of claim 4, wherein the polyphase network is implemented on a substrate having a plurality of layers, and the connections use vias to traverse the layers.

[Claim 6]   6. The polyphase network of claim 5, wherein the first and second connections have substantially equivalent lengths and number of vias, the third and sixth connections have substantially equivalent lengths and number of vias, the fourth and fifth connections have substantially equivalent

lengths and number of vias, and the seventh and eighth connections have substantially equivalent lengths and number of vias.

[Claim 7]   7. The polyphase network of claim 1, wherein:

a second end of the second impedance of the first type is coupled to a first end of the third impedance of the second type using a seventh connection; a first end of the third impedance of the first type is coupled to a second end of the second impedance of the second type using an eighth connection; and the seventh connection is coupled to the eighth connection.

[Claim 8]   8. The polyphase network of claim 7, wherein the polyphase network is implemented on a substrate having a plurality of layers, and the connections use vias to traverse the layers.

[Claim 9]   9. The polyphase network of claim 8, wherein the first and second connections have substantially equivalent lengths and number of vias, the third and sixth connections have substantially equivalent lengths and number of vias, the fourth and fifth connections have substantially equivalent lengths and number of vias, and the seventh and eighth connections have substantially equivalent lengths and number of vias.

[Claim 10] 10.   The polyphase network of claim 1, wherein the impedances of the first type have a phase angle characteristic different than the phase angle characteristic of the impedances of the second type.

[Claim 11] 11.   The polyphase network of claim 10, wherein the impedances of the first type are resistors and the impedances of the second type are capacitors, or the impedances of the first type are capacitors and the impedances of the second type are resistors.

[Claim 12] 12.   The polyphase network of claim 11, wherein the resistors have substantially equivalent resistance and the capacitors have substantially equivalent capacitance.

[Claim 13] 13.   A polyphase network comprising:

a first impedance of a first type;
a second impedance of the first type;
a third impedance of the first type;
a fourth impedance of the first type;
a first impedance of a second type;
a second impedance of the second type;
a third impedance of the second type;
a fourth impedance of the second type;
a first connection coupled between a first end of the first impedance of the first type and a first end of the first impedance of the second type;
a second connection coupled between a second end of the fourth impedance of the first type and a second end of the fourth impedance of the second type;
a seventh connection coupled between a second end of the second impedance of the first type and a first end of the third impedance of the second type;
an eighth connection coupled between a first end of the third impedance of the first type and a second end of the second impedance of the second type;
a third connection coupled between a first end of the second impedance of the first type and a second end of the first impedance of the second type;
a fourth connection coupled between a second end of the first impedance of the first type and a first end of the second impedance of the second type;
a fifth connection coupled between a first end of the fourth impedance of the first type and a second end of the third impedance of the second type; and
a sixth connection coupled between a second end of the third impedance of the first type and a first end of the fourth impedance of the second type;
wherein the third connection crosses the fourth connection, the fifth connection crosses the sixth connection, and the seventh connection crosses the eighth connection.

[Claim 14] 14.   The polyphase network of claim 13, wherein the impedances of the first type are resistors, and the impedances of the second type are capacitors.

[Claim 15] 15.   The polyphase network of claim 14, wherein the resistors have substantially equivalent resistance and the capacitors have substantially equivalent capacitance.